

## REMARKS/ARGUMENTS

Claims 1, 4, 6-11 and 14-23 are present in the instant application. In the most recent Office Action claims 1-5 and 11-15 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by JP 06-218580 (“Tanaka”). Claims 1-4, 7-8, 11-14, 17 and 18 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by US Patent No. 5,837,388 to Doko, *et al.* (“Doko”). Claims 1-7 and 9 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by US Patent No. 4,923,100 to Nakamura, *et al.* (“Nakamura”). Claims 1-9 and 11-19 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by US Patent Application Publication No. 2006/0027625 by Dockus, *et al.* (“Dockus”). Claims 1-5, 9-14, 19 and 20 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by US Patent Application Publication No. 2003/0085258 by Ishio, *et al.* (“Ishio”). Applicant respectfully traverses all rejections for at least the reasons set forth below.

By the above amendments, claims 2, 3, 5 and 12-12 are canceled without disclaimer or prejudice to their subsequent reintroduction in this or a continuing application. The amendments to claim 1 find support at least in subject matter recited in previous claims 2, 3 and 5. Moreover, as recited in the specification, for example at page 6 lines 9-14, the brazing filler metal composition may be either a mixture of a plurality of powder metals, or from powder metal of a single composition. Therefore, claim 4 was amended to depend from claim 1. The amendments to claim 11 find support at least in subject matter originally recited in claims 12 and 13. New claims 21 and 22 are supported by the description of the original specification for example at page 4 line 24 through page 5 line 19. The subject matter of new claim 23 finds support in the original specification, for example at page 8 lines 2-5, and the accompanying figures. No new matter has been added by these amendments.

Initially, in each rejection the Office Action makes the assertion that “the method of forming the sheet does not further limit the structure, composition or function of said sheet.” It is unclear whether this is a conclusion, or a statement of controlling law. If the former, Applicant submits it is incorrect and unsupported, as discussed below. If the latter, Applicant submits it is at best incomplete. The patentability of a product-by-process claim is determined with reference to the structure implied by the recited steps. M.P.E.P. § 2113. Moreover, the recited method steps are centrally relevant to the scope of method claim 11, *et seq.* In the case of the present application, claim 1 recites a sheet of brazing material formed by powder roll compaction. As disclosed in the

specification, this process imparts material characteristics to the brazing sheet, characteristics that are neither present nor suggested in the applied references. The Office Action improperly failed to give these characteristics their appropriate patentable weight in comparing the claims to the applied references. Therefore, Applicant respectfully submits that the rejections are insufficient at a threshold level for failure to fully consider all recited features of the claims. “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Turning to the references specifically, the Office Action first applies Tanaka against claims 1-5 and 11-15. Tanaka discloses a production method for a composite soldering material. Two tapes (2A, 2B) made of soldering material or soldering material and a raw material of soldering material are fed in between two rolls (1A, 1B) with a powder material (7) sandwiched between the two tapes. The powder material is disclosed to be a high melting point metal, ceramic, alumina, glass, or the like. See paragraph [0025]<sup>1</sup>. The powder of Tanaka does not serve as a soldering material, but is used as a spacer for providing the molten solder with a constant thickness. See paragraph [0027]. Therefore, the product of Tanaka will be seen as patentably distinguished from the brazing sheet recited in claim 1, and the method of producing a brazing sheet recited in claim 11. Moreover, claim 1 as amended above recites powder of a brazing filler metal composition not being completely alloyed, and in a mixed state. In contrast to this recited feature, Tanaka does not describe such a texture as the texture of metal tapes 2A, 2B. Because the flexibility of the sheet shaped composite material depends upon properties of the metal tapes as disclosed in Tanaka, the material produced and its method of production will be seen as substantially different than the claimed invention, and patentably distinguishable.

Turning then to the application of Doko, the Office Action asserts that Doko teaches a brazing sheet produced by a powder of brazing filler mixture, which may contain a binder, by roll compaction. Applicant respectfully disagrees. In contrast to the recited claims, Doko does not describe a brazing sheet made by powder roll compaction, but rather describes a brazing sheet in which a core material is clad with a solder material of metallic alloy. See Col. 4, line 33 - Col. 5, line 26. Because of the material properties of the brazing sheet described in Doko, it cannot have the texture of the brazing sheet recited in claim 1, in which powder of brazing filler metal

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<sup>1</sup>For the Examiner’s reference, attached hereto is a machine translation of Tanaka.

composition is not completely alloyed, and is in a mixed state. Moreover, Doko describes rolling the brazing sheet (see, e.g., Col. 2 lines 36-37) but does not describe formation of the sheet by powder roll compaction. Accordingly, because the material properties of the sheet produced according to Doko are substantially different than a sheet produced according to the present claims, the brazing sheet recited in claim 1 will be seen as patentably distinguished over Doko, as is the method recited in claim 11.

Turning then to the application of Nakamura, the Office Action asserts that Nakamura teaches a brazing sheet produced by rolling a brazing filler mixture. Applicant respectfully disagrees. Nakamura describes a clad sheet comprising a cladding layer and a substrate with an optional intermediate layer. This clad sheet is produced by laminating a cladding layer on the substrate by rolling after cleaning the substrate by beam irradiation. See, Figure 5; Col. 8, line 17 - Col. 9, line 2. Therefore, the method of Nakamura is different from the powder roll compaction method described in claim 11. Moreover, the texture of the clad sheet of Nakamura is materially and substantially distinguishable from the brazing sheet recited according to claim 1 of the present invention.

Turning to the application of Dockus against claims 1-9 and 11-19, the Office Action asserts that Dockus teaches a brazing sheet produced by rolling a powder of brazing filling mixture which might contain a binder. However, Dockus does not teach or suggest all features currently recited in independent claims 1 or 11. Dockus describes a brazing product which may comprise a powder metal. See paragraph [0064]. The powder metal mixture can be applied to an aluminum containing substrate as a coating, using a binder, or by roll compaction. See paragraph [0065]. However, because Dockus applies the powder metal to a substrate material, the end product is materially distinguishable from the product of the present claims. Nowhere does Dockus teach or suggest formation of a brazing sheet by powder roll compaction without the use of a substrate. Therefore, the powder bearing brazing product of Dockus cannot have the textural features of the brazing sheet recited according to claim 1. Therefore, the present invention will be seen as patentably distinguished from the Dockus reference.

Turning to the application of Ishio to claims 1-5, 9-14 and 20, the Office Action asserts that Ishio teaches producing a brazing sheet by rolling a powder of brazing filler mixture which may contain binder by roll compaction, citing paragraph [0032]. Applicant respectfully disagrees. The description of paragraph [0032] does not describe a rolling of powder. Rather, Ishio describes a

brazing material including a phosphorus-copper brazing alloy which can be worked into a thin sheet. See paragraph [0007]. The brazing material layer formed of the alloy may be formed integrally with the metal sheet. See paragraph [0012]. Therefore, Ishio describes rolling of a metallic alloy, but does not describe rolling of powder. Therefore, independent claims 1 and 11 will be seen as patentably distinguishable from Ishio.

As discussed above, the subject matter of independent claims 1 and 11 is patentably distinguished over any of the applied references. Each of dependent claims 4, 6-10 and 14-23 each depend, either directly or indirectly, from one of independent claims 1 or 11. Each of these dependent claims is separately patentable, however they are each offered as patentable for at least the same reasons as their respective underlying independent base claims. In light of the foregoing, applicant respectfully submits that all rejections have been obviated, and kindly requests favorable reconsideration and withdrawal.

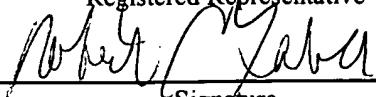
In light of the foregoing, applicant respectfully submits that all claims recite patentable subject matter, and kindly solicits an early and favorable Notice of Allowability on all claims. In the interest of brevity, applicant has addressed only so much of the rejections as is considered sufficient to demonstrate the patentability of all claims. Applicant's failure to address any portion of the rejections should not be construed as an acquiescence in the propriety of such portions not addressed. Applicant maintains that the claims are patentable for reasons other than those specifically discussed, *supra*.

If the Examiner has any reservation in allowing the claims, and believes that a telephone interview would advance prosecution, she is kindly requested to telephone the undersigned at her earliest convenience.

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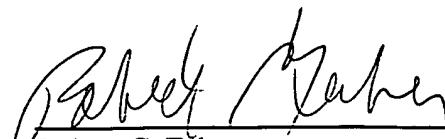


Signature

September 15, 2006

Date of Signature

Respectfully submitted,



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